

[Claims]

What we claim is;

1. A method for forming a CVD film under a vacuum, in which introduction of a process gas in a process chamber and exhaustion from the process chamber is not executed simultaneously.
2. A method for forming a CVD film under a vacuum, in which introduction of a process gas in a process chamber or oxidizing or nitrifying the film formed on a substrate process, and exhaustion from the process chamber is not executed simultaneously.
3. A method for forming a CVD film according to claim 1, wherein the inside the process chamber is an oxygen or nitrogen plasma condition when the process gas is introduced therein.
4. A method for forming a CVD film according to claims 1 or 3, wherein the gas plasma is applied continuously on the substrate in the same process chamber after the introduction of the process gas in the process chamber in order to improve the film characteristics.
5. A method for forming a CVD film according to any one of the claims 1 to 4, wherein the process after the introduction of the process gas is repeated in the same process chamber in order to obtain a uniform predetermined thickness film.
6. A method for forming a CVD film according to any one of the claims 1, 3, 4 and 5 , wherein the plasma reactor is a helicon wave reactor.